GP/2862

Docket No.: 01-04 US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

HR
J. Steptoe
12-6-02

In re the Application of:	
Thomas Barbara	Examiner: Vargas, Dixomara
Serial No.: 09/927,265	Art Unit: 2862
Filed: August 10, 2001	
Title: EXTENDED MAXWELL PAIR GRADIENT COILS	

I, Debbie Kus, hereby certify that on November 19, 2002, this correspondence is being deposited with the United States Postal Service as first class mail, in an envelope addressed to Assistant Commissioner for Patents, Washington, D.C. 20231

Debbie Kus 11/19/02
Signature Date Signed

Assistant Commissioner for Patents
Washington, D.C. 20231

AMENDMENT UNDER 37 C.F.R. §1.111

Sir:

In response to the Office Action mailed August 28, 2002, please amend the subject application as indicated below.

IN THE SPECIFICATION

Please replace the paragraph beginning on page 4, line 27 to page 5, line 2, with the following rewritten paragraph:

To improve the linearity of the gradient near the origin O, the first non-linear term is set equal to zero, or $c_3=0$. This leads to the following linearity-establishing condition:

$$\int_0^{kmax} dk k^4 I_\varphi{}^p(k) S_0(k) K_0'(ka) I_0(k\rho)=0 \qquad (3)$$

where ρ is the radial distance from the z-axis, K is the Bessel function of the second kind, k_{max} is a suitable upper limit of the integration, and $S_0(k)$ may be referred to as the shielding factor, given by

$$S_0(k)=1-K_1(kb)I_1(ka)/K_1(ka)I_1(kb). \qquad (4)$$

The linearity-establishing condition (3) given above should ideally hold for all values of ρ. For